

### Learning and the evolution of social systems: an epigenetic perspective

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Klaus Eder

## 1 Evolution and the Role of the Epigenetic System

The theory of epigenetic developments in evolution rests upon two assumptions. First, it refers to developmental processes that decouple biological from genetic evolution. Decoupling evolutionary processes from genetic evolution is even more important for social evolution. Second, it claims that the development of an organism plays a vital role in evolution. It takes into account the specific role individual development plays in evolution.

Thus epigenesis refers to definite evolutionary processes unintelligible within Darwinian theory (Ho and Saunders, 1982). This special characteristic of epigenetic processes restricts the field of random developments in evolution. The Darwinian processes of variation and selection are seen as of secondary relevance for evolution to take place. The logic of evolution is decoupled from Darwinian logic, which thus loses its pre-eminent role in explaining evolutionary sequences.

An epigenetic system that organizes individual development as cognitive learning processes (as does the epigenetic system underlying social evolution) changes evolutionary processes in several respects. It changes (1) the tempo of evolution (2) the internal structures that restrict the relevance of selection processes and (3) the conditions that favour learning processes and therefore the innovations that are necessary for social evolution.

The central characteristic of social evolution is that society is produced by such cognitive learning processes. Learning processes allow for the **self-production** (Touraine, 1973) of society. Of central importance to the process of self-production is a special type of cognitive learning, namely **moral learning** (Fairservis, 1975). Moral development emerges in learning processes specific to the human species, and is therefore considered to be the key variable in a theory of social evolution (Eder, 1976, 1984; Habermas, 1981).

The Darwinian assumption that epigenesis has to be explained as a by-product of the evolutionary mechanisms of adaptation through variation and selection is incompatible with the idea of moral development through social evolution. On the contrary, evolution on the social level is a by-product of epigenetic processes of cognitive development. We claim that the epigenetic system - being itself a by-product or end-product of evolution on the biological level - to be the primary factor in social evolution.<sup>1</sup>

But this argument against Darwinian theory is still deficient. For it can be argued - and this is the theoretical strategy of the behavioral school of sociocultural evolution (Langton, 1979) - that the cognitive learning capacity of individual human beings is subject to evolutionary processes on the sociocultural level. Starting with such individualistic assumptions Darwinian theory cannot be put into question. The theoretical implication of this argument is that social evolution is the result of variation and selection working directly upon human individuals. Epigenesis is considered to be nothing but an obscurantist assumption in the theory of biological and social evolution.

This argument against an epigenetic approach to social evolution can only be refuted by showing that the ontogenetic acquisition of cognitive capacities is necessarily a social process, that learning on the cultural level is necessarily a collective learning process. Only when cognitive capacities are shown to be socially constituted can the argument concerning the central role of the epigenetic system in social evolution be defended. The central thesis to be defended in the following is therefore that the developing entity in social evolution is not the individual, but culture. **Culture** is the result of the social interaction of learning individuals, the result of a **collective** learning process. Cultural development therefore reinforces the epigenetic processes that make social evolution possible. The more cultural development advances the less Darwinian theory, and with it each variant of individualistic theories of social evolution (Schmid, 1982b), seems to be an adequate theoretical strategy.

My thesis about the role of evolutionary theory in the social sciences will be discussed in three steps. First, a classical attempt to explain evolutionary change in history through genuinely social factors (the Marxian argument) is reconstructed and then

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<sup>1</sup> The concept of "evolution" is used in its strict meaning: The term evolution refers to stochastic processes generated by the mechanisms of mutation and selection. The term epigenesis refers to developmental processes, especially to the processes of cognitive and moral development in social evolution. Therefore speaking of moral or cognitive evolution is somewhat misleading.

reformulated. Second, the idea of a social construction of the cognitive universe is discussed using the example of state formation in historical tribal societies in Angola. In a third and last section, the theoretical consequences of the axiom of a social constitution of learning processes in social evolution and its effects upon a theory of social evolution are explored.

## 2 Epigenesis and Evolution in Sociological Theorizing

### 2.1 *Two Old Answers to the Problem of Societal Change*

Why do societies change? Marx gives two different answers to this question, and these answers still generate competing views on social change. The first answer is that societies change because people relate to each other in an antagonistic manner; this is the theory of class conflict. The second answer says societies change because they are continually forced to adapt their own normative framework to changing environments; this is the theory of the structural strain between the productive forces and the social relations of production.

These answers lead to mutually exclusive evolutionary theories. The theory of class conflict rests on assumptions about collective action generating social change. This first answer is epigenetic insofar as Marx assumes the logic of collective action to be the logic intervening into social evolution. His second answer is Darwinian because in principle the productive forces select - under certain conditions - for specific social relations of production. This strain theory is compatible with Darwinian assumptions of social systems put under selective pressures in a given environment.

In recent reformulations of the Marxian theory the first answer has gained a new significance. In Habermas' reconstruction of Historical Materialism (Habermas 1979) the evolution of society is conceptualized as the evolution of the **normative structures** of the system of society. The evolution of normative structures is to be seen as an epigenetic process based on an internal logic that is different from Darwinian logic. The unsolved problem in this reconstruction of Marx' first answer is how normative evolution comes about. Evolution is reduced to a developmental logic of normative structures derived from the logic of individual cognitive learning processes. Its mechanisms remain unknown; they are to be looked for in "history".

But this separation of the logic of evolution from the mechanisms of evolution conceals the basic nature of this process: that evolution consists of the production of normative structures within processes of communication. Normative structures change, not because of the cognitive capacities of some individuals, but because there is disagreement about normative questions between individuals. This conflict forces those tied to different views to communicate and then to learn how to coordinate their antagonistic orientations and convictions. The change of normative structures then is the result of necessarily **collective learning processes** (Miller, 1986).

Such a theory of the dynamic aspects of the process of normative evolution pushes an epigenetic interpretation of Marx' first answer one step further. The attempt will be made to reconstruct class conflicts as collective learning processes and then to incorporate the idea of class conflict as the mechanism of social evolution into a general theory of social epigenesis.

## *2.2 Some Implications of the Theory of Class Conflict*

What is a class conflict? Class conflict implies antagonistic views about what course societal development should take, and is thus conflict over the cultural orientation of the development of society. Class conflict is the mechanism or, as Marx puts it, the motor of historical development. This definition allows for the preliminary distinction between two types of societies: into those with and those without class conflict.

Societies without class conflict are societies without history (Lévi-Strauss, 1962). Research in social anthropology has given us a series of examples of social structures whose historicity has been destroyed. In such cases society can be regarded as a closed system of classification. A society has no history if it is totally classifiable in the terms of its own logic. These societies have "forgotten" past antagonisms; they exist in a closed cultural universe. An example of a traditional society without historicity is the caste society in classical India whose ideal structure was identified by Dumont (1967, 1970) as being based on the difference between pure and impure. There also are examples of modern societies claiming to be based on a stable social structure defined by egalitarian principles. Thus socialist societies claiming such a stability can be considered to live in such a closed cultural universe.

But the theoretical idea of a closed cultural universe and the related idea of a stable social order is based upon an illusion. It reproduces the illusionary image by which

society describes itself. This self-description is characterized by the **suppression** of social antagonisms. The theoretical image of a stable society without class conflict reproduces an illusory social consensus, one where the **official** image of a society has succeeded in neutralizing opposing **unofficial** images of itself. In such societies, changes can only be induced from outside, be they demographic changes, changing material circumstances, or changes induced by the crisis-ridden logic of the societal system itself. In such societies, collective learning processes are necessarily blocked. These societies have to "wait" for the "objective laws of history". This critique of a certain theoretical image of society holds for primitive societies as well as for traditional and modern societies.

This critique implies that class conflict is the normal state of affairs. An adequate theoretical image of society has to start with the assumption that societies have a history. Society is not a classified and classifiable entity, but an action system within which opposing collective actors struggle for the control of the classificatory system. This antagonistic situation has been institutionalized historically in at least three different ways.

The first is through **ritual regulation**. Pre-state societies institutionalize class conflict in the form of rituals. A collectively shared model of social organization is reaffirmed against opposing forces through ritual processes symbolically enacting the decomposition and recomposition of the social order. The ritual process is, as Turner (1969) puts it, an attempt to establish anti-structure in order to reestablish structure. It is a process of negating the negation of structure. Ritual regulation in simple societies serves different functions at the same time; it helps to solve quarrels between families as well as ecological problems. It regulates interpersonal relations as well as environmental relations (Rappaport, 1979, pp. 27-42). But there is a much more fundamental aspect to ritual. It is also a mechanism for the reproduction of a social structure against the disorder brought about by group conflicts in the society. Rituals function to regulate conflicts between groups in a village and between villages. By regulating warfare and thereby reorganizing asymmetries between lineages, rituals guarantee social integration on the level of the societal system. Class conflict in pre-state societies therefore can be said to be regulated by rituals.

The second way class conflict has historically been institutionalized is through **domination**. In premodern state-societies class conflict is controlled by legitimate political authority. In these "traditional" societies the continual display of the symbols of political authority, especially its hierarchical representation, allows for the regulation

of class conflict. When this form of political authority is weakened class relations are then defined by the naked use of force to suppress the peasants, a quite unstable solution, as the history of classical empires shows. How class conflict is structured in traditional societies can be seen in Geertz' analysis of the 19th century Balinese kingdoms (1980). The king, called Negara, was the guarantor of an order which bound together the antagonistic groups of society. He symbolized the holy order within which antagonistic groups struggled for control of power. This symbolic role was institutionalized in his official function: to secure the continuity of the ceremonies. That the ceremonial context is the field of class conflict in traditional society is also emphasized by Sahlins (1981, pp. 67-77). Geertz further argues that it is the symbolic universe that gives individual actions of a chief or a commoner their social weight: the position of an actor (be he a chief or a commoner) in the culture-as-constituted does determine the consequences of his individual actions. In the course of such culturally constituted and socially classified collective action the symbolic universe is transformed by fitting the intersubjective context to the given objective context. The ideal form of such a vertically constructed society has been found in the cultural system of hierarchy as exemplified in the Indian caste system (Dumont, 1967).

The third way class conflict has historically been institutionalized is through **permanent class conflict**. In modern societies neither ritual nor political authority can continue to serve as a social base for class conflict. A new structure is needed for the situation where class conflict has become a permanent one. The new institutional form is the democratic handling of conflicts, and this implies the self-production of society by collective learning processes. This is why modern society is the first society that can actually describe itself as a class society (Mousnier, 1974, pp. 13-46; Luhmann, 1984). Marx draws a radical conclusion: He conceives class conflict in modern society as class **struggle**. This concept of a struggle presupposes a non-normative concept of class conflict that can in fact be found most explicitly in the Darwinian concept of society (to which Marx sometimes seems to adhere). But there is also another model of class conflict contained in Marx' work. This model is based upon a normative concept of what constitutes class relations in modern society (Habermas, 1979). Marx gives some hints when he discusses the proletariat organizing a collective learning process in order to constitute itself as a class. As a learning collectivity the proletariat uses class conflict as the medium of "emancipatory" (in the strict sense of the word) learning processes.

The arguments concerning the theoretical categorization of class conflict are arguments for the idea that society produces itself via class conflict, that class conflict defines the dynamics of the process of the social self-organization of society. The category of class

itself is an empty category; it refers to possible empirical referents of the process of social self-organization. In analysing concrete societies this category has to be filled with examples. Developmental systems whose dynamics are based upon class conflicts are socially structured. But nothing has been said concerning the structural properties of the situation called class conflict. To further my argument the structural properties of an epigenetic system regulating social evolution by the mechanism of class conflict have to be identified.

### *2.3 From the Dynamics to the Logic of Epigenesis*

The idea of class conflict developed so far gives some preliminary hints concerning the operation of an epigenetic system within the process of social evolution. The next step consists of abstracting from the idea of class conflict. The epigenetic system is to be constructed on the level of a general theory of social action. It will be shown that the difference between Darwinian and epigenetic assumptions has to do with two incompatible theories of action. The first theory conceives social action to be guided by the calculation of anticipated profits. The second conceives social action to be constituted by communication. The first theory is of a psychological, the second of a sociological nature, a difference that Campbell (1975) interprets as a conflict between psychology (science) and moral tradition (religion). Psychology is indeed inadequate to treat moral traditions scientifically; for here we have to deal with a genuinely sociological phenomenon. That leaves us with the question of a science of morals, i. e. sociology.

The **"action-as-profit" theory** (Harris, 1979) assumes that changes in social structure are dependent upon solutions of the biological, psychological and ecological problems experienced by all human beings and all human cultures. The logic of action is utility: People prefer those situations which work to their advantage. Thus in a situation characterized at the same time by ecological barriers and growing overpopulation where war is a normal consequence, less powerful groups might well elect a permanently subordinate status. The benefits of such a status can be said to exceed the costs of trying to maintain independence or retreating into ecologically less favorable environments. The logic is simple: Benefits and costs are calculated in terms of natural needs like hunger, survival etc. Culture is nothing but the collective effect of aggregated individual strategic actions. This behavioural theory of action does not distinguish between epigenesis and evolution. Individual action is coordinated by selective pressures upon individual actions; the logic of coordination is reduced to the



logic of selective pressures. The only problem left is to define the selective structures as such. In this theory epigenesis is without importance for evolutionary changes. Epigenetic assumptions are nothing but a form of obscurantism (Harris, 1979).

The "**action-as-communication**" theory (Leach, 1976) assumes that social change is dependent upon a shared symbolic universe which allows for communication. Symbols order the world for the people concerned. Shared interpretations of symbols generate a world in which men can communicate with each other. Culture is a shared symbolic universe (Geertz, 1973) that allows for the coordination of social action. This theory assumes that without the collective construction of a symbolic universe there is no object upon which selective pressure can be exerted to produce **social** evolution. The theory therefore separates the development of a shared symbolic universe from the evolutionary pressures upon a symbolic universe. Epigenesis then becomes of utmost importance in sociocultural evolution.

A behavioural theory of action has no need to know how culture is organized. A behavioural analysis analyses nothing but the actual performance of the members of a culture. But this observable performance could be a bad performance of a cultural script. To go beyond a behavioural theory therefore the plan of culture has to be known. Leach gives an illuminating analogy: To know the score of a symphony it is not sufficient to observe the performance of that symphony by an orchestra; you also have to know the rules that are obeyed by the musicians. The same is valid for culture as a whole: To know a culture requires knowing the rules underlying the actions of its members (Leach, 1976). This implies looking into the organizing structures of culture in order to know the epigenetic logic of social evolution.

The structuralist movement in cultural anthropology has identified some general structures of cultural systems. Fundamental to structuring cultural systems is **binary classification** (Lévi-Strauss, 1962), a principle that is characteristic of all cultures. A second fundamental rule is **ranking** (Schwartz, 1981). This relational structure underlies the imaginative ordering of nature as well as the normative ordering of society in diverse cultures. Whereas binary classification is a cognitive mechanism constituent of culture, ranking refers to a cognitive mechanism that allows for vertical social classification. Thus ranking articulates more specific differences between forms of a social order.

Three general types of ranking underlying social configurations can be distinguished: analogical, hierarchical and functional. Each has different structural effects upon the

social construction of reality. **Analogical** ranking is typical for natural communities; ranking is here bound to natural roles. **Hierarchical** ranking is based upon more complex images of nature, those that distinguish between the natural and the supernatural through a superordination/subordination relationship. This type of ranking sees the social order as the extension of a natural order. Social ranking is based upon one's place in a hierarchical and therefore holy order; the idea of caste is the clearest case in this respect. **Functional** ranking sees the social world from "individualist" premises. The image of an ordered "supernature" is replaced by the image of cooperating individuals. Social ranking is based upon individual rights or individual success. The idea of an egalitarian society of free individuals is the ideal type of a society organized along these lines.

These different cultural logics are not restricted to the function of organizing cultural representations of society. The symbolic structures that make up the different cultural worlds are not only created and changed by rules of communication, ideally by **rules of argumentation** (Miller, 1986). They do something much more fundamental: They make communication in society possible by regulating a specific property of communication, the possibility of saying "no". Communication necessarily produces conflicts because people can say "no" to a communication. This specific property of social communication reveals the function of a shared culture: to define a collectively shared symbolic world that restricts the possibilities of saying "no" which is the precondition for entering into a process of resolving conflicts. Through resolution the shared world can be changed and expanded and can serve anew as a reference world for future conflicts.

In pre-state societies the logic underlying the resolution of disputes reflects the age, personal prestige and status of the parties involved (Gluckman, 1977). Natural differences make up the social structure of this type of conflict resolution. A second form of handling disputes can be found in hierarchically organized societies, where the tacit acceptance of a hierarchy is the cultural presupposition common to those engaged in a dispute. The word of the king has more weight than the word of the peasant. In such societies, the appeal to authority is thus the traditional solution to the problem of conflict resolution. A third way of resolving conflicts is based upon egalitarian norms. They provide the means for a form of conflict resolution that allows for the neutralization of unequal status. This is the modern solution to social conflicts.

These three forms of conflict resolution constitute three distinct forms of social order. The first can be interpreted as producing a concrete interactive morality underlying a

social order, the second an authoritarian one, the third an egalitarian one. From an evolutionary point of view these types of morality can be seen as stages of the evolution of a social order. The stage-like change of morality can be said to be the outcome of an epigenetic process. Social evolution can be said to be bound to a **moral epigenesis** that passes through a pre-authoritarian, an authoritarian and a post-authoritarian stage of conflict resolution.

This stage theory should not be confused with those stage theories that derive the properties of stages from institutional properties (Fried, 1967, 1975; Service, 1975; Cohen and Service, 1978). Institutional forms are the time- and space-specific realizations of a moral order. They are the result of evolutionary pressures upon moral orders and are therefore not indicators of moral stages. Whether or not these epigenetic assumptions are necessarily bound to the assumption of a developmental logic (Schmid, 1982a) is a problem to be discussed later. That there are normative implications in such a theoretical approach cannot be denied.

### **3 Epigenetic Developments and Social Evolution**

#### *3.1 Stage Models in Evolutionary Theory*

How are epigenetic developments related to evolutionary processes? Epigenetic developments are not independent of those evolutionary processes that are defined by transformations over time and variations in space. Epigenetic processes cannot be separated empirically from Darwinian evolutionary processes.

The Darwinian conception of evolutionary processes does not imply any assumptions about stages. The specific evolution of a concrete social system in space and time depends upon the internal properties of that specific system and its place within an larger natural and social environment. In this sense it is possible to describe the specific evolution of a tribal system into a more complex system, that is into a state-society. The logic of the epigenetic system is reduced to the logic of the systemic functioning of society. Friedman and Rowlands (1982) have made an impressive attempt to do this. Using the example of the evolutionary change of a specific type of tribal system they start with analyzing the social relations of production and exchange and try to show how internal trends toward increasing complexity over time can either be neutralized or differentially selected for by a given structure of the environment.

This concept of an epigenetic system forces Friedman and Rowlands to introduce the difference between specific evolution (which is epigenetic and local!) and general evolution which refers to the development of the spatial system and the structural time period within which epigenesis can take place. The logic of general evolution is the dominant logic; it is the logic of a system reproducing itself in a larger environment and thus being independent of the logic of the epigenetic system. This evolutionary logic determines the degree of change necessary given the initial structures of the local system in question.

But beyond the degree of transformation is the problem of the very character of this transformation. Do the changes in structure allow for collective learning process or not? Assuming that human collective action "normally" implies learning processes on the part of those engaged in it, we can discriminate between evolutionary changes that bring about learning and those that do not. A theory of evolution that overlooks the possibility of learning or non-learning as an outcome is forced to subordinate epigenetic processes to the factors of space and time that select for transformation. The possibility that a society will not learn can never be ruled out. Change in a society that does not learn, must be accounted for by selective pressures exerted upon it. Thus an anti-epigenetic evolutionary theory is limited to accounting for very specific cases: societies that do not learn.

There is a real problem inherent in an evolutionary theory that reduces the epigenetic system to systemic properties of local systems defined in space and time. It underrates the role of learning processes for the evolution of society. The problem how to relate epigenetic processes (i.e. learning processes) to evolutionary processes (in the strict sense, i.e. of the Darwinian type) in a more productive manner will be treated in the following using an example that has become the object of numerous evolutionary explanations: the origin and evolution of the state in the history of mankind.<sup>2</sup>

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<sup>2</sup> The literature on state formation is vastly expanding. For some of the more important recent literature dealing with this special topic see Wright (1977), Saxe (1977), Claessen and Skalnik (1978), Claessen (1978), Skalnik (1978), Cohen (1978), Bloch (1982).

### *3.2 Evolutionary Theory and the Problem of State Formation*

The process of state formation can be described as the evolutionary transformation of tribal systems into state societies. A "state" implies a normative framework that reorganizes on the most fundamental level the kin society, the form of social organization typical for pre-state societies. This process has been the subject of diverse attempts to construct an evolutionary theory of social change (Fried, 1967; Service, 1975; Eder, 1976; Claessen and Skalnik, 1978).

Currently, the dominant theory of the formation of the state is based on the cultural evolutionist model. This theory starts with the assumption that pre-state societies are characterized by an "egalitarian" form of social integration based on kinship relations. The kinship structures underlying these relations regulate hereditary succession, access to land and water, collective cooperation in the more important economic activities and the distribution of goods between and within different descent groups. Intensification of production and demographic growth lead to shifts in social organization and to the crystallization of the role of "big men" who represent more complex forms of political power.

The appearance of big men allows for the institutionalization of functionally specific decision-making procedures, procedures which are much more flexible than those ordained by any kind of ritual regulation. On the basis of this political power the big men can also theoretically accumulate economic power. In order to uphold the old equilibrium (based on reciprocity between descent groups) big men are supposed to organize redistributive processes. They in fact have to be generous, have to give away all their economic power in order to uphold their political power. Should the population grow further and cause geographic and/or social circumscription to tighten dissociation of political from economic power will lose effect. Under such circumstances the generous redistributors can reinforce their political power by transforming voluntary contributions to the stock for redistribution into some kind of taxes. On this new economic base big men are able to pay a clientele. The big men are transformed into warrior chiefs (Sahlins, 1963). While these warrior chiefs are still bound into a hierarchically organized kinship structure, they can now mobilize their fellows for warfare and raids. Theirs is the power to substitute the small patrilineal groups with multi-village military alliances. The role of the warrior chief is the nucleus for the role of a king who redistributes only in part those goods he has received by coercion. When the role of the king is institutionalized primitive society is transformed into a state society.

In this model the concept of culture is based upon a naive theory of social action. Henderson (1972) has succinctly stated the limitations of this old evolutionary paradigm. He sees it as a theoretical simplification which allows for a

systematic concentration upon factors that may be called "external" to individuals: (a) social factors, or the constraints imposed by a few major types of socially structured situations (economic, political, ritual, etc.), and (b) ecological factors (the relationship between technology and environment). By setting all human social behavior within a comparable structural framework, and assuming that each actor acts simply to maximize his own wealth or power and orders his learning processes towards this end, the scholar may readily direct attention to the social and ecological constraints that either produce equilibria within and between groups or else tend to change their structures (Henderson, 1972, pp. 3-4).

The theory of action underlying cultural evolutionism is the "action-as-profit" theory. From these individualistic premises the social processes leading to state formation cannot however be grasped. The normative structures within which strategic action has to take place are of no theoretical relevance. Thus the main aspect of the transition from pre-state structures to state structures, i.e. the transformation of the structure of the social conditions of strategic action, remains hidden.

In the following chapter the evolution from pre-state societies to state societies will be analyzed in more detail in an attempt to show how epigenetic developments and evolutionary pressures interact. Of special importance will be the attempt to prove the relative independence of the epigenetic system (i.e. its development) from adaptive pressures (i.e. evolutionary processes). Material from an ethnohistorical study of state formation (Miller, 1976) will be used to show how individual actions and the normative modes by which they are coordinated are involved in the transformation of social systems as basic institutions of society change. This will serve as a starting point for an alternative theory of state formation as well as an argument for a radical epigenetic approach to social evolution.

## 4 An Epigenetic Theory of the Formation of the State

### 4.1 *The Historical Formation of Early Mbundu States*

The empirical basis of the ethnohistorical account of state formation in Angola from the 16th to the 18th centuries given by Miller (1976) is oral traditions. This allows Miller to speak not only about events, but also about the ideas related to these events. Oral history provides better empirical data for the construction of a theory of state formation than are usually used in this field. The historical perspective allows Miller to reconstruct state formation as a continual give and take of different pre-state political institution in the evolution toward a state-like structure. It shows how different groups use new political ideas either from their own social context or from an alien context in order to construct more cohesive political institutions (hunting groups, ritual groups etc.). The decisive historical step is their transformation into states (e.g. kingdoms). This process succeeds to a certain extent. It is followed by break-aways from kingdoms which are then organized on the basis of differing local conditions. State structures are then modified again.

Such an "internalist" explanation of primary and secondary state formation is directed against all "externalist" theories of state formation, in this specific case against the theory of the Hamitic origins of African states and their "daughter" states explaining state formation by migration and conquest by people with higher civilizations. These theories have survived in the so-called "Sudanic state hypothesis" (Miller, 1976, pp.4-11).

Attempting to reconstruct the material of Miller for an evolutionary theory of the social origins of the state the following three points are to be stressed:

- (1) Political institutions which cut across the lineage base of society were myriad in Mbundu pre-state societies. Their functioning depended upon the functioning of the basic units: the descent groups which regulated the material life, the land rights, the work process, and the distribution of goods within the lineage.
- (2) Authority was conceived in a specific way by the Mbundu, resting on the ability to invoke supernatural sanctions. It was not inherent in human beings, but resided in authority emblems associated with titles. Authority was an abstraction, independent of its living incumbents. Thus authority was dissociated from concrete social relations; it has already become an ontological idea. This is to be taken as a criterion for an authoritarian morality.

(3) The institutional steps toward statehood in Mbundu societies can be seen as a process of socially constructing a generalized authority role. First authority is restricted to authority over persons other than kinsmen; it operates outside the kin society. Then the king himself is made an outsider; he is credited with supernatural (magical) means and is given a certain secular institutional backing (slaves). At last the king becomes the impartial arbiter between competing lineage groups, basing his power on a legal right. The social construction of generalized authority roles follows a developmental pattern starting with a chief still being dependent upon his descent group, then moving through a theocratic ruler up to a legally defined king.

The first point describes lineage structure as hampering the development of political institutions into more enduring institutions. The descent group is seen here as the great conservative factor in political evolution. External factors such as the existence of salt pans or ports of trade contribute to the crystallization of more enduring political institutions than those typical for the lineage based society. But these "external" factors were never strong enough to enable the new political institutions to transform the descent structure into a structure better suited to the function of political domination.

For the Mbundu, ngundu, the descent group, was the fundamental mechanism of social integration. Kibinda, the hunting society, created links between the ngundu, and performed several functions essential to their welfare. On the other hand the kibinda cut across the ngundu and was in fact the nucleus for the beginning state formation. The structural problem throughout the history of early state formation is the relationship between such cross-cutting institutions and the lineage structure of society.

This structural problem is linked to the second point made above. Authority in Mbundu society was dependent upon authority titles or emblems: to have authority was to have control over an authority emblem. Historically, once a new symbol of authority had spread among the Mbundu lineages, individual holders were able to expand their personal spheres of influence, thereby appropriating authority over persons not related to them by kinship. In Mbundu society the decisive developmental step was the structural shift from lunga titles of authority to mavunga titles of authority. Lunga titles were hereditary titles, awarded to the lineages by lunga kings. Lunga kings were thus under the control of the lineage groups. These titles did no more than reinforce the links between descent groups regardless of the physical distance. The lunga concept of an authority role was still grounded in concrete interactions.



A different concept of authority was introduced with mavunga titles which were awarded to persons obliged to perform specialized duties in support of the king and his court. Mavunga titles defined for the first time among the Mbundu a social position lying outside the control of descent groups. These titles thereby created tensions between the lineages and the holders of mavunga titles.

Mavunga structure had its counterpart in the kinguri structure. The kinguri title derived from a specific lunga title. Kinguri groups tried to eliminate lineages as the organizational backbone of the social structure, and to replace the laws of descent with the laws of the kinguri. These laws were intended to hinder the establishment of descent relations and in fact forbade childbearing. Children would enter the band only through adoption or enslavement and would owe allegiance only to the kinguri. The kinguri groups moreover demanded total obedience, seeking thereby to abolish other competing titles of authority. This would lead to a centralization of authority in the kinguri. Historically, the creation of total power as the basis of kinguri state-building failed: The kinguri solution was unacceptable to other chiefs within the reach of the kinguri groups. These in fact broke with the kinguri and maintained their authority upon other lunga titles.

Both the mavunga and the kinguri images of authority were based more upon master-servant (or patron-client) relations (Eisenstadt and Roninger, 1984; Eisenstadt and Lemarchand, 1982) than upon social relations through descent. They were attempts to create a consistent, abstract conception of authority apart from the ngundu descent relations. But these concepts lacked the supernatural legitimacy. The realm of the supernatural was still in the hands of the diviners, not the authority holders. With the rise of the Imbangala kings, who replaced the kinguri type of state system, this changed. Historically, the Imbangala kings constructed a universal moral difference between themselves and their subjects. The Imbangala kings represented themselves to be non-human in contrast to other people who were merely human. These kings ritually ate human flesh while forbidding it to non-king individuals. This cannibalism drew on analogies which the Mbundu saw between cannibals and carnivores. This ritual became the mechanisms of a hierarchical ordering between those with authority and those without it.

The early Mbundu states that based their political authority primarily upon lunga titles must be described as **chiefdoms**, because they were dependent upon lineage structures. The kinguri states and the Imbangala kilombo crossed this chiefdom level. They were theocratic states based upon elaborate rituals in which the symbols of basic social

differences (esp. cannibalism or the separation of women from the world of political authority) were the elements of a new hierarchical social order.

The third point refers to the institutionalization of authority. The kinguri example shows that destroying the lineage structure does not suffice. The **kilombo** is an example of an institutional device that attempted to realize a consistent ideal of unquestioned authority. The kilombo was at the outset a circumcision camp, one of the many institutions cutting across lineage groups found in the societies of this region. This institution was used by Imbangala kings in an effort to establish a non-lineage social structure, thereby institutionalizing their hegemony over the Mbundu people. The initiation of new members into the kilombo through rituals not connected to kinship allowed a radical ideological break with the kin world. With only one restriction, that these males not be circumcised, a requirement that qualified all those who had not yet undergone circumcision in their own lineages, the Imbangala kings were able to attract a considerable manpower. The uncircumcised young men were not yet fully socialized Mbundu. They were also young enough to become easily indoctrinated into the culture of the kilombo. Using the material and ideological resources of the kilombo gave the Imbangala king double control over his subjects, over male society and over the relations with the supernatural. He was not just a chief, but a theocratic ruler, fulfilling as well the function of the diviner that traditionally had been preserved by designated diviners.

But the kilombo ultimately failed to build up a new infrastructure for society. For to reproduce itself it had to rely mainly upon men coming from Mbundu villages. These men reintroduced the old Mbundu ideas and structures into the kilombo. The primacy of non-kin and non-human liaisons was softened. The Imbangala ideology of non-humanness and the rigorous conditions of life in the kilombo which differed dramatically from the everyday life of the people continually worked against what the kilombo was trying to establish. The new cultural system was only partly institutionalized; for only the ruling class, not the dominated people, accepted the authoritarian morality.

After the dissolution of the kilombo the Imbangala kings took another step in political evolution with the help of the Portuguese. Slave trade and legal backing by the Portuguese now became the basis of the Imbangala kings. This "external" factor gave rise to a new relationship between the Mbundu lineages and Imbangala kings which was reinforced by a consonance between the ideology associated with the titles of the Imbangala kings and the given Mbundu political system: The kings based their

authority upon the *lunga* titles the Mbundu were accustomed to. The lineages could banish the *kilombo*, but not the cooperation between the Imbangala kings and the Portuguese. After the end of the slave trade in the 1850s the balance of power shifted again, back from the kings and in favour of the lineages. This was the end of the traditional state for the Mbundu.

#### *4.2 A Social-Evolutionary Theory of State Formation*

The example of the Mbundu shows that the political "moves" of chiefs, leaders etc. are bound to a normative framework that puts restrictions on strategic actions. Only within a normative context is strategic (or utilitarian) action possible. In order to extend the range of possible strategic actions the normative framework must be changed. Seen from this perspective the optimum of possible strategic actions is reached when the normative context itself is built upon the rules of strategic action. This is the state of nature described by Hobbes; it is society free of norms.

This type of evolution is always possible, but it never has a stable outcome. Stable solutions to the problem of a normative order of society must be built upon social structures that allow for a moral resolution of conflicts. For the Mbundu, such a social structure was only partially generated. But such a solution hints to the general conditions favouring evolutionary change toward state societies. In the transition from simple to more complex societies the evolutionary prerequisite is the substitution of the logic of concrete reciprocity by the logic of political domination. Concrete reciprocity relies upon natural differences for its own legitimacy. Political domination relies upon hierarchical differences. This transition from pre-state societies to state societies succeeds because it transforms natural differences into hierarchical differences. Both differences are morally justifiable. Whether a social system is grounded upon natural or hierarchical differences depends upon what kind of morality socializes it.

Such a perspective implies a reversal of the perspective of classical cultural evolutionism. A big man is not transformed into a warrior chief because social changes give him the strategic chance to accumulate power. A big man becomes a warrior chief because people redefine a social situation in such a way that his social role can be played differently: as that of a ruler. The social situation is defined no longer by the logic of concrete reciprocity, but by the logic of political domination. This redefinition implies a complementary redefinition of the role of the people: They become the subjects of a ruler. But why do people change their definition of what they regard as the

right state of affairs? What makes people change their mind in such a way that culture can be completely reversed?

The conjectural causes that set into motion or inhibit this process are to be described as factors external to the social actions of the people concerned. External circumstances that select for evolutionary change are a necessary condition of such a change. Pressure from the external material environment is necessary in order to set structural redefinitions into motion. Such a situation is identical with what Marx understood as the crisis of a mode of production. According to this theory, the formation of the state presupposes a crisis of the "neolithic" mode of production. Such a crisis can be described as the inability of the kinship structures to solve the problem of distributing the goods produced in a society. Insofar as kinship ties can no longer serve as an institutional frame for systemic reproduction, changes in the system become necessary.

Beyond these conjectural causes that function as selective mechanisms in an evolutionary process, some internal conditions on the cultural level also need to be fulfilled. They can serve as starting points for attempts to redefine the normative framework within which a society can be reproduced, especially solve its distributional problems.

Such conditions can be shown to function in the legal and religious field in the transition to state societies. In egalitarian systems the legal function is integrated into the ritual complex (Koch, 1974). Chiefs have the right to act as arbiters. They even may have the right to sanction. But the only difference between the vengeance of the chief and that of any other person is that the vengeance of the chief is more cruel. Neither right is therefore specific to the chief. In stratified societies the legal function becomes more specific. In the kingdoms of the Shanti, Barotse, etc. we find judicial courts which are the property of chiefs or kings (Gluckman, 1977). But the chief or king is himself restricted to a symbolic function. While domination is accepted on a religious plane, the king is powerless on the legal plane; the legal function (sanction) is taken over by representatives of the king. This is an ambivalent solution that makes concessions to a concrete social morality, but also contains elements of an authoritarian morality of law and order. Only after the king is defined as the final judge can authority and domination be institutionalized (Eder, 1976).

This development of the legal culture has repercussions in the development of the religious belief system. The gods become masters of destiny; they are no longer the objective causes of the fate of the people. The gods become guardians of justice; they

are no longer merely the guardians of the objective order of the world. New gods of law supersede the old chthonic gods of the archaic world. These new gods represent a new cultural logic, that of a hierarchical moral order. The cultural changes produce a new developmental system which is the starting point for the further social evolution of the social system of society. The legal and religious definitions of hierarchy imply a reorganization of the internal environment, of the epigenetic system of culture.

Such cultural change can be interpreted as a learning process. Learning processes are on the one hand processes by which the objective world is cognitively appropriated. As such they allow for the cognitive assimilation of external pressures upon action. But the result of learning processes such as new technical inventions also pose new problems for the reproduction of social systems. They force the moral infrastructure of society to readjust. Such a cognitive interpretation of cultural development as a learning process has already been proposed by Fairservis (1975) and others.

The "external systemic environment" contains the conditions that favour possible evolutionary changes. The "internal cultural environment" contains models for a social order. Each of these environments is behind one of two competing evolutionary theories, one an objectivist theory that explains the social forms of communication through selective pressures at work in society, and the other a subjectivist theory that explains the products of these social forms through an innate progressivism in humanity. The controversy between the two is wrong and misleading. In the first case, culture appears as a superstructure, representing reality more or less. In the second case culture determines social evolution. Both approaches are inadequate, however, because they each fail to take into account the interactive relation between culture and social form. Culture is socially produced, and in this process of social production society produces itself. In this process of self-production external factors may intervene and produce a social system determined by space and time.

The topological image of base and superstructure is also misleading. There is neither a special logic to the system of social relations (of production or distribution etc.) nor one to the system of cultural symbols, be they of religious or secular nature. But the Marxian tradition provides an alternative image to this misleading one: the image of class conflict as the motor of history, as the mechanism of social evolution. This image covers the idea expounded above exactly: Class conflict is at the same time a conflict concerning the cultural orientation of societal development and a social relationship that relates classes of people with each other. Class conflict is a mechanism that

changes (if there is change at all) cultural orientations as well as the social context within which classes relate to each other.

This brings us nearer to an answer to the question of why people change their moral outlook. How can we explain the learning processes that react to external influences and at the same time produce a different cultural universe? This question can be answered with the concept of **collective** learning processes. For when moral questions are at stake, people have to communicate with each other, they have to enter into social relations, and this creates a reflexive mechanism. In trying to learn, people create a social universe within which to organize their learning processes. And they create social contexts that cut across the established forms of social relationships. Such leveling social forms (e.g. religious rituals or hunting societies in pre-state societies) are therefore marginal with respect to the dominant social environments (e.g. kinship institutions in pre-state societies). As they are used in handling moral disputes social forms become constitutive conditions for their resolution. In some cases this handling breaks apart the social form in which it takes place. These are the historical situations where **new** forms of social relations are invented.

Thus the class of people communicating in ritual hunting societies and the class of people communicating in kin communities represent antagonistic cultural orientations and contexts of communication. But as soon as these contexts enter into relation with each other a dynamic is set into motion that changes the the cultural legitimacy of social forms of communication that have so far been uncontested. Learning has no need for externally induced dynamics: Already, before selective pressure comes in, the social world is in the state of epigenetic evolution.

## 5 Conclusions

The concept of epigenesis has a well-defined status in the theory of biological evolution. It refers to organic developmental processes that decouple biological evolution from genetic evolution. These processes are supposed to exert an autonomous role in evolution. Epigenesis on the social level does the same: It decouples social evolution from organic evolution. This is why this concept has been used to construct a theory of evolution that takes into account the properties of social evolutionary processes (themselves evolutionary emergent).

It has also been shown that the individualistic assumptions underlying the biological conception of epigenesis are a block to an adequate understanding of social evolution. Therefore the idea of an epigenetic developmental system governing evolution has been expanded into one that could better be called an **epiorganic system** governing social evolution. Social evolution is characterized by the fact that it has become possible to disconnect cultural development from individual learning. There is no requirement that all individuals learn. It is sufficient that they communicate. Through the process of communication some learn and thereby redefine the collective knowledge and consciousness of society. In this sense the specific characteristic of social evolution is that **society learns**. This often contested Durkheimian idea is to be defended against all forms of individualistic reductionism.

There are only two assumptions behind the theoretical idea of a socio-cultural epigenesis: that disputes over moral questions are normal and that the resolution of disputes implies communication. As such this theoretical ideal can be formulated in a parsimonious manner similar to the old neo-Darwinian theory. Progressivist assumptions are not needed. Therefore the classic objections to applying epigenetic approaches in theories of social evolution are unwarranted.

Our theory of an epigenetic evolution thus changes the function that the idea of variation and selective retention can have on the socio-cultural level. It also modifies the function that the idea of a developmental logic (leading to an end state) can have on social evolution. For these ideas are themselves descriptions of social evolution that fulfill different functions. As the idea of socio-cultural selection, Darwinism is an attempt to relate the status of a society in the international system of societies to its competitive strength. As the idea of a developmental logic in history, progressivism is an attempt to mark off the distance between the past and the present in terms of primitive versus modern and thus to evaluate the status one society has vis-à-vis another.

As soon as these theoretical positions are disputed the social context changes. Once these positions are seen as self-descriptions of society, the vantage point for observing the system also changes. The position of the Darwinist or the Progressivist has become obsolete. For we have learned that these are nothing but possible ways of looking at society. They have become antagonistic ways of society looking at itself. Society - after the disillusioning experiences with its classical theoretical self-descriptions - has to reorganize its description of itself. When we try to observe this new antagonistic reflection we are left with the sole idea that what we observe is nothing but the

collective learning process in which we as the observers also take part. What we observe is nothing but the "autopoiesis" of society in a collective learning process in which we take part.



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